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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,036	08/19/2004	Tsun-Lai Hsu	NAUP0578USA	5035

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EXAMINER

OWENS, DOUGLAS W

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,036

Applicant(s)

HSU, TSUN-LAI

Examiner

Douglas W. Owens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 19, 20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-11, 13, 16, 18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 2, 6, 14, 15 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7 – 9, 19, 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation, "an N well guard ring surrounding the device". The scope of the claim is not known, since it is unknown if the N well guard ring of claim 7 is a second N well guard ring, or if it is the same N well guard ring cited in claim 1. Claims 8 and 9 are indefinite since they depend from an indefinite claim.

Claim 19 recites the limitation, "an N well guard ring between the P+ guard ring and P substrate guard ring." The scope of the claim is not known, since it is not known if this is a second N well guard ring or the same N well guard ring cited in claim 16.

Claim 20 is indefinite since it depends from an indefinite claim.

3. Claim 22 recites the limitation "...The substrate isolation design of claim 21..." in line 1. There is insufficient antecedent basis for this limitation in the claim, since there is no claim 21.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3 – 5, 10, 11, 13, 16 and 18 rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,831,346 to Li et al.

Regarding claim 1, Li et al. teach a substrate isolation design (Figs. 3 – 6), comprising:

a P substrate (46);

a P well (50) positioned on the substrate;

a device (63) positioned in the P well; and

a P substrate guard ring (54) surrounding the device, wherein an N well guard ring (52) is positioned between the device and the P substrate guard ring.

Regarding claim 3, Li et al. teach a substrate isolation design, further comprising a P+ guard ring (68; Col. 7, lines 42 – 44) surrounding the device.

Regarding claim 4, Li et al. teach a substrate isolation design, wherein the P+ guard ring is between the device and the P substrate guard ring.

Regarding claim 5, Li et al. teach a substrate isolation design, wherein the N well guard ring is between the P+ guard ring and the P substrate guard ring.

Regarding claim 10, Li et al. teach a substrate isolation design, comprising:

a substrate (46);

a device (63) positioned on the substrate;

a first guard ring (68) surrounding the device;

a second guard ring (52) surrounding the first guard ring; and
a third guard ring (54) surrounding the second guard ring, the third guard ring being a substrate guard ring, wherein the second guard ring comprises an N well guard ring.

Regarding claim 11, Li et al. teach a substrate isolation design, wherein the first guard ring comprises a P+ guard ring.

Regarding claim 13, Li et al. teach a substrate isolation design, wherein the third guard ring comprises a P substrate guard ring.

Regarding claim 16, Li et al. teach a substrate isolation design, comprising:
a P substrate (46);
a device (63) positioned in the substrate; and
a P substrate guard ring (54) surrounding the device, wherein an N well guard ring (52) is positioned between the device and the P substrate guard ring.

Regarding claim 18, Li et al. teach a substrate isolation design, further comprising a P+ guard ring (68) positioned between the device and the P substrate guard ring.

Allowable Subject Matter

6. Claims 2, 6, 14, 15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas W. Owens whose telephone number is 571-272-1662. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven H. Loke can be reached on 571-272-1657. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Douglas W Owens
Examiner
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DWO